

PATENT APPLICATION  
Docket No: 14321.82

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of )  
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                        Mashiro Sasaura et al. )  
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                        )  
Serial No.:         10/571,887                      ) Art Unit  
                        ) 1722  
Filed:             March 13, 2006                      )  
                        )  
Confirmation No.: 2670                              )  
                        )  
For:                 METHOD AND APPARATUS FOR      )  
                       PREPARING CRYSTAL                    )

INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. § 1.97

Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Please find, pursuant to 37 C.F.R. § 1.98(a)(1), the enclosed Form PTO-1449 which contains a list of all patents, publications, or other items that have come to the attention of one or more of the individuals designated in 37 C.F.R. § 1.56(c). While no representation is made that these references may be "prior art" within the meaning of that term under 35 U.S.C. §§ 102 or 103, the enclosed listed references are disclosed so as to fully comply with the duty of disclosure set forth in 37 C.F.R. § 1.56.

Moreover, while no representation is made that a specific search of office files or patent office records has been conducted or that no better art exists, the undersigned attorney of record believes that the enclosed art is the closest to the claimed invention (taken in its entirety) of which the undersigned is presently aware, and no art which is closer to the claimed invention (taken in its entirety) has been knowingly withheld.

In accordance with 37 C.F.R. §§ 1.97 and 1.98, a copy of each of the listed references or relevant portion thereof that is not a US patent document is also enclosed.

Statement of Relevance of References Listed  
Unaccompanied by English Translation  
Under 37 CFR § 1.98(a)(3)

In accordance with 37 CFR § 1.98(a)(3), the following concise explanation of the relevance of each listed reference that is not in the English language and unaccompanied by a translation into English is provided.

/F.H./ Japanese Publication No. 62-096387: PURPOSE: To prevent the contamination of a single crystal with platinum particles and to obtain a long single crystal having high quality, by supplying and melting a raw material of crystal in a platinum-group metal crucible held in a specific heating apparatus in stationary state, lowering the crucible to effect the growth of a single crystal and repeating the above process. CONSTITUTION: A platinum-group metal crucible 1 charged preparatorily with a small amount of initial raw material is placed on a crucible supporting table 6 attached to a crucible supporting pipe 7 which can be vertically moved and rotated with a crucible lifting apparatus 5. The crucible supporting table 6 is inserted in a electric furnace 3 having a proper temperature distribution shown in the figure. The initial raw material is melted in the electric furnace 3 and the crucible 1 is lowered to obtain a single crystal (b). The crucible 1 is stopped, a granular raw material 8 is supplied from a raw material feeder 4 through a raw material feeding pipe 2 to a melt (a) at a depth of 20-40mm. After feeding, the crucible 1 is lowered 20-40mm at a rate of about 5mm/hr to effect the growth of the crystal. The above procedures are repeated to obtain a long single crystal.

/F.H./ PCT Publication No. WO 99/63132: An apparatus for manufacturing monocrystals, using a pull-down method, wherein a raw powder material (5p) is supplied onto a premelting plate (3) in an electric furnace (10) by a raw powder material supply unit (20) to melt the material (5p) thereon and form a material melted-liquid (5m), which is introduced into a crucible (2) continuously by dropping, to grow crystals (18), dry air being introduced into the raw powder material (5p) in a tank (6) therefor to prevent the material (5p) from being moisturized, a pipe (9) for transferring the raw powder material (5p) being cooled to prevent the material (5p) from being melted to clog the transfer pipe (9) with a melted material, whereby monocrystals having a stable chemical composition, a large diameter and a large length can be manufactured at a low cost.

Dated this 9<sup>th</sup> day of May 2007.

Respectfully submitted,

/Dana L. Tangren/ Reg # 37246  
DANA L. TANGREN

Attorney for Applicant  
Registration No. 37,246  
Customer No. 022913  
Telephone No. 801.533.9800

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/Felisa Hiteshew/

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